

IN THE CLAIMS

Please amend claims 1 to 7 and 9 to 18, cancel claim 8 and add new claims 19 to 22 as follows:

1. (Currently amended) A machine-tower crane for lifting and handling loads with an orientable articulated placing jib, comprising:
 - a mast with a rotating pivot;
 - an articulated jib comprising a jib foot, articulated at its first end on the top of the mast by means of a horizontal rotation shaft, and a jib head member articulated for rotation by means of a horizontal articulation shaft on the second end of the jib foot;
 - a jib holding assembly comprising at least one stanchion attached to the mast or the pivot and extending above the mast, a jib holding line-cable attached on the jib and guided over a pulley on said stanchion, and a moving counterweight connected to the jib by the said retaining line-jib holding cable; and,
 - wherein the counterweight is made to follow a guiding track rigidly secured to the rotating pivot opposite to the jib, said guiding track with having a variable varying slope, wherein said guiding track has at least a first portion and a second portion, said first portion being closer to the mast than said second portion, rigidly secured to the rotating pivot, with the proviso that the slope in the first portion is smaller than the slope in the second portion, said guiding track supporting the said counterweight, arranged opposite the jib, and wherein the variations in said slope are chosen such that the counterweight exerts a set of variable forces on the said jib and on the structure of the said machine, contributing to balancing the machine during movements of deployment / retraction of the jib in articulated working mode.

2. (Currently amended) A ~~lifting machine~~tower crane according to claim 1, wherein the guiding track has, in its portion closest to the mast, a slope less than a slope in at least a portion further away from the mast.

3. (Currently amended) A ~~lifting machine~~tower crane according to claim 1, wherein the guiding track (1) has a curvilinear profile.

4. (Currently amended) A ~~lifting machine~~tower crane according to claims 1, wherein the guiding track has a sigmoidal, s-shaped profile.

5. (Currently amended) A ~~lifting machine~~tower crane according to claim 1, wherein the guiding track consists of a pair of parallel curvilinear rails, and wherein the counterweight comprises a moving crab comprising running means running on the said rails and ballast elements carried by the said crab.

6. (Currently amended) A ~~lifting machine~~tower crane according to claim 5, wherein the crab comprises a chassis and, on each of the lateral sides of the chassis, support elements for receiving and carrying the said ballast elements on each side of the rails so that the level of the centre of gravity of the counterweight is close to the level of the guiding track.

7. (Currently amended) A ~~lifting machine~~tower crane according to claim 56,

wherein the said support elements are pairs of arms arranged in an inclined position, wherein said ballast elements consist of sheets each having holes with a surface area greater than the cross section of the support arms and configured so that the ballast sheets suspended from a pair of associated support arms is held in an immobile position with respect to the said crab whatever the position of the crab on the guiding track and parallel to the said guiding track.

8. (Cancelled) ~~A lifting machine according to claim 7, wherein said support arms are foldable.~~

9. (Currently amended) ~~A lifting machine~~tower crane according to claim 1, further comprising a jib raising device making the machine capable of working in articulated mode and in luffing mode, wherein the jib head member comprises, on each side of its articulation axis on the jib foot, respectively a jib head member tip and a counter jib head member, the said second end of the jib foot and the counter jib head member having conjugate shapes enabling the jib head member tip to come into a position aligned with the jib foot in the luffing working position and wherein the variations in slope of the guiding track are ~~chosen~~sosuch that the variable traction on the jib assist the luffing device and/or the changes in conformation of the jib associated with a change in working mode.

10. (Currently amended) ~~A lifting machine~~tower crane according to claim 1, wherein the end of the said jib holding ~~line~~cable is fixed to the jib head member.

11. (Currently amended) A lifting machinetower crane according to claim 10, wherein the point of attachment of the end of the jib holding line-cable is arranged between the jib head member tip and the counter jib head member.

12. (Currently amended) A lifting machinetower crane according to claim 11, wherein the said attachment point is arranged at a distance from the articulation between jib foot and jib head member so as to describe an arc of a circle about the articulation axis, and wherein the said jib holding line-cable crosses the jib foot / jib head member articulation axis during the deployment of the jib in articulated working mode between the minimum reach position and the maximum reach position.

13. (Currently amended) A lifting machinetower crane according to claim 1, wherein the rotation of the jib head member about the jib foot / jib head member articulation is controlled by means of a system of opposing cables.

14. (Currently amended) A lifting machinetower crane according to claim 13, wherein said system of opposing cables comprises at the first cable, is fixed to the end of the counter jib head member at a first point of attachment, and that a the second cable, is fixed to the tip of the jib head member at a second point of attachment, wherein a distance from said articulation to said second point of attachment is at approximately the same as a distance from the first point of attachment to said articulation as the distance from the point of attachment of the cable with respect to the articulation.

15. (Currently amended) A lifting machinetower crane according to claim 13, wherein the said system of opposing cables comprises electric winches and return pulleys housed inon the jib foot.

16. (Currently amended) A lifting machinetower crane according to claim 15, wherein the electric winches are housed close to the first end of the jib foot and the return pulleys close to the second end of the jib foot.

17. (Currently amended) A lifting machinetower crane according to claims 1, wherein the rotation of the jib head member about the end of the jib foot is effected by means of a gear system comprising an electric motor, a pinion and a toothed segment.

18. (Currently amended) A lifting machinetower crane according to claim 17, wherein the said electric motor is fixed to the jib foot and drives, via the said pinion, a circular toothed segment fixed to the jib head member.

19. (New) A tower crane according to claim 1, wherein the rotation of the jib head member about the jib foot / jib head member articulation is actuated by a device fixed on the jib foot.

20. (New) A tower crane according to claim 19, wherein said device comprises an electric motor and/or an electric winch.

21. (New) A machine for lifting and handling loads with an orientable articulated placing jib, comprising a mast with a rotating pivot, an articulated jib comprising a jib foot, articulated at its first end on the top of the mast by means of a horizontal rotation shaft, a jib head member articulated for rotation by means of a horizontal articulation shaft on the second end of the jib foot, a jib holding assembly comprising at least one stanchion, a jib holding line and a moving counterweight connected to the jib by the said jib holding line, wherein the machine further comprises a guiding track rigidly secured to the rotating pivot opposite to the jib, said guiding track having a varying slope and supports said counterweight and wherein variations in said slope are such that the counterweight exerts a set of variable forces on the said jib and on the structure of the said machine, contributing to balancing the machine during movements of deployment / retraction of the jib in articulated working mode, wherein said guiding track consists of at least one curvilinear rail, and wherein the counterweight comprises a moving crab comprising running means running on the said at least one rail and ballast elements carried by the said crab, said crab comprising a chassis and, on each of the lateral sides of the chassis, support elements for receiving and carrying the said ballast elements on each side of the at least one rail so that the level of the centre of gravity of the counterweight is close to the level of the guiding track.

22. (New) A machine for lifting and handling loads with an orientable articulated placing jib, comprising a mast with a rotating pivot, an articulated jib comprising a jib foot, articulated at its first end on the top of the mast by means of a horizontal rotation shaft, a jib head member articulated for rotation by means of a horizontal articulation shaft on the second end of the jib foot, a jib holding assembly comprising at least one stanchion, a jib holding line and a moving counterweight connected to the jib by the said jib holding line, wherein the machine further comprises a guiding track rigidly secured to the rotating pivot opposite to the jib, said guiding track having a varying slope and supports said counterweight and wherein variations in said slope are such that the counterweight exerts a set of variable forces on the said jib and on the structure of the said machine, contributing to balancing the machine during movements of deployment / retraction of the jib in articulated working mode, wherein the rotation of the jib head member about the jib foot / jib head member articulation is controlled by means of a system of opposing cables comprising electric winches and return pulleys housed in the jib foot.

Respectfully Submitted,

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